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Barriers and facilitators to the uptake of contraceptives among adolescents and young adults in Ghana

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Abstract

Background: Family planning plays a vital role in improving reproductive health, empowering individuals, and promoting sustainable development, however, its usage among young people in developing and low-income countries remains an issue that needs urgent attention. The objective of this study was to investigate the factors that hinder or enable young individuals in the Tamale Metropolis from accessing and using contraceptives and to understand the challenges and opportunities that influence their reproductive health decisions

Methods: A descriptive study was carried out from February to March 2023, involving a sample of 384 young individuals between fifteen to twenty-four years. Stratified sampling was used to select the participants, ensuring representation from diverse subgroups. Information collection was done using a structured questionnaire, and statistical analysis was performed using SPSS version 27. The study employed inferential statistical methods, and outcomes were considered significant if the p-value was less than 0.05 ($P < 0.05$).

Results: Out of 384 young people, a majority (54.9%) were males and 39.3% had unprotected sex. All respondents have heard about family planning (FP), male condom was the most popular FP method (88.3%), and 48.9% strongly agreed that contraceptives reduce fear of unplanned pregnancy. Only 25.0% of respondents had used family planning services, and about 39.1% of the respondents saw FP users as prostitutes. The odds of FP usage were higher among Christians young people (aOR, 3.24; 95% CI, 1.47-7.14; p=0.003), and those who had ever had sex (aOR, 5.93; 95% CI, 2.34-15.03; p<0.001) compared to their counterparts.

Conclusion: A significant proportion of them showed good knowledge of contraception, with male condoms being the most widely known method. On the other hand, it was found that the usage of contraceptives among young people was low. This finding underlines the need to refine access to family planning information and services by providing accurate, comprehensive information through healthcare providers, websites, hotlines, and educational materials.

Keywords: *contraceptive uptake, adolescents, young adults, family planning barriers, sexual health education, stigma and contraception, healthcare access, reproductive health*

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Evidence in Context

• Investigates factors affecting contraceptive use among youths in Tamale, Ghana • All participants knew about family planning; condoms were most recognized. • Low usage of contraceptives mainly due to stigma. • Recommends enhancing information delivery via healthcare providers, web resources, and educational materials. • Stresses community involvement and dispelling myths to improve usage.

To view Article

Introduction

Family planning involves making intentional decisions about the timing and spacing of pregnancies, typically achieved through the use of contraceptive methods or voluntary sterilization, enabling individuals and couples to control the size and spacing of their families. Family planning (FP) empowers people to decide when and how many children they want to have. It plays a crucial role in accomplishing the United Nations' third Sustainable Development Goal, which aims to ensure widespread health coverage, providing all individuals with access to essential, high-quality healthcare services and safeguarding them against financial hardship and risk. Unwanted pregnancies present a health risk and incur additional medical expenses, such as those for prenatal care, delivery, postpartum care for the mother, and routine pediatric treatment for the child [1].

According to the World Health Organization, contraceptives are methods of thinking and living that are freely adopted, based on information, attitudes, and responsible decisions made by individuals and couples, to increase the health and welfare of people, families, groups, and communities [2]. This effectively contributes to the social development of a nation. Child spacing, often known as family planning, allows a couple to decide when, where, and how many children they wish to have [3]. The pill, sterilization for both genders, IUDs, injectable contraceptives, implantations, male and female condoms, diaphragms, and emergency contraception are all current means of contraception. Traditional techniques consist of intermittent abstinence, withdrawal, and folkways [4].

In underdeveloped countries, estimates indicate that 38 million young women desired to postpone becoming pregnant in 2016. Fifteen million of these young women have avoided 5.4 million unintended births by using modern contraception. 2.9 million of these pregnancies would have resulted in unsafe abortions based on current abortion rates. Furthermore, contemporary contraceptive usage prevents 3,000 maternal deaths annually in developing nations. Contraception use versus failure makes up a considerably smaller portion of unplanned pregnancies [5].

According to Bhatt et al [6], there are crucial interventions to reduce the negative health effects of family planning (FP). Such measures can reduce maternal mortality in low-income nations by 44% and can avoid 90% of abortions, 32% of maternal deaths, and 20% of pregnancy-related morbidity globally. FP lessens adolescent pregnancies, eliminates health risks associated with pregnancy, and aids in the fight against HIV/AIDS. Access to contraception encourages education, improves women’s economic standing, and progressively gives them adequate power, which leads to better health outcomes and a higher quality of life. Again Ahmed and Seid [7] said, that family planning unquestionably contributes to lowering infant mortality, improving gender equality, preventing the spread of HIV, and reducing poverty. According to research conducted by Ahmed and Seid [7] in multiple nations, access to family planning can lower newborn and child mortality by 10%, maternal deaths by as much as 40%, and maternal morbidity by 21%.

The number of unintended births would decrease by 59% from current levels of 121 million annually, better still by an estimated 6.0 million pregnancies annually if all 23 million teenage women who lack access to modern contraception received improved contraceptive services. Unwanted births wouldn't be completely prevented since some users—especially those who use condoms and other temporary techniques that depend on the users' actions—would experience contraceptive failure.

However, compared to recent heights in contraceptive use, there would be 2.1 million fewer unplanned births (62% reduction), 3.2 million fewer abortions (57% reduction), including 2.4 million fewer unsafe abortions, 700,000 fewer miscarriages of unintended pregnancies (60%), and 5,600 fewer maternal deaths associated with unintended pregnancies (71% reduction) [5].

According to a study done in Tamale Metropolis, many social stigmas in the rural villages of northern Ghana prevent most young adolescents—male and female—from using contraception. Since parenthood is valued in many countries, social pressure to have more children is thought to be one of the obstacles to contraception [4]. Similar research done in Tamale Metropolis indicated that the majority of respondents (82.9%) remain unable to openly address contraceptive issues with their parents. Unfavorable staff attitudes (60.2%), contraceptives unavailability (50.0%), travel time to medical facilities (44.9%), stigma from peers and society (48.4%), and cost of contraceptives (42.5%) were seen as obstacles to getting contraceptives. In their locality, about half of the respondents (52.1%) cannot obtain contraception [8].

Girls who become pregnant as adolescents suffer considerable negative effects on their health, education, social development, and economics. However, there is still a sizable global demand for contraception that hasn't been addressed, especially among women in sub-Saharan Africa. Young people's use of contraception is still low in Burkina Faso, where 25.1% of teenage girls between the ages of 15 and 19 are either pregnant or have children. Only 11.2% of adolescents who engage in sexual activity do so using modern methods [9].

An earlier survey in Ghana discovered that 14% of teenagers (15-19 years old) were either new mothers or expecting their first child [10]. In addition, findings from earlier studies indicate that the Northern region, including the Sagnarigu Municipality, has a high rate of teenage pregnancies. However, there are still open questions regarding sexual behavior trends, attitudes toward using contraceptives, and obstacles to using contraceptives within the Sagnarigu Municipality. As a result, the study focused on the sexual behavior of female adolescents (15–19 years old) and the reasons they believed they used or did not use modern contraception [11].

There have not been studies that identify the barriers and enablers to young people using contraceptives in the Tamale metropolitan area, which would have been used to guide both local and national policymakers on family planning. However, research on barriers and enablers to young people using contraceptives is scarce in the metropolitan, although the Metropolitan has a large proportion of children and young adults (nearly 36.4% of the population). Hence there was a need to conduct this research to assess barriers and facilitators to the uptake of contraceptives amongst youth in the Tamale Metropolis.

Methods

Study setting, design, and population

This study was a cross-sectional community-based investigation conducted in the northern Ghanaian city of Tamale. Ghana comprises 261 Metropolitan, Municipal, and District Assemblies (MMDAs), with Tamale acting as its capital. The 2021 population and housing census shows that Tamale Metropolis is home to 374,744 people, with 185,051 men and 189,693 women [12]. Savelugu Municipality shares a boundary with Tamale to the north, Yendi Municipal Assembly to the east, the Tolon District to the west, the Central Gonja District to the southwest, and the East Ganja Municipality to the south.

Study population

The study was conducted among adolescents (both males and females aged 15-24 years) in Tamale Metropolis. The research included participants aged between 15 and 24 years who willingly gave their consent to be part of the study. On the other hand, individuals below the age of 15 or above 24 were excluded. Additionally, individuals who did not reside within the Tamale Metropolis were also excluded from the study.

Sample size determination

The sample size for the quantitative study was determined using the Snedecor & Cochran [13] formula with a 95% Z-value of 1.96, estimated population proportion (p) of 0.5, and a margin of error (e) of 0.05. After calculations, the required sample size was 384.

Sampling techniques

WHO Expanded Programme on Immunization (EPI) cluster sampling technique was adopted. Although it was originally designed to estimate immunization coverage, it is also applied in community-based cross-sectional surveys. In this study, we divided the Tamale metropolis into four strata. This stratification was based on the Tamale Metropolitan Health Directorate's division of the metropolitan area for the provision of healthcare. A sampling frame of the number of communities in each stratum was created based on information from the Ghana Statistical Services, and a simple random sampling method was used to select one community for each stratum. The estimated sample size was then distributed equally among the four selected communities.

Once the communities were identified a community entry was done to explain the rationale of the study to the opinion leaders and introduced the data collectors. With the help

Of the opinion leaders, the center of each community was identified. They were, however, not present during data collection.

In each community that was chosen, the trained interviewers used the EPI method to begin at a central location, where a pen was spined and a random direction was picked from that point. A home was then randomly selected among those along the line from the centre to the outside of the community. The trained interviewers entered the selected houses and if the respondents who met the criteria were present, consent was sought and the interview conducted. Where parents or significant others were present, a private place was secured within the house to conduct the interview.

Data collection tool and procedure

A designed questionnaire was used to elicit information from study respondents. The instrument was developed to cover all aspects of the specific objectives of the study. The questionnaire had four (4) sections i.e. Section A, B, and C. Section A: comprised of socio-demographic proforma which included age, currently attends school, education status, marital status, sex, religion, mother's level of education, father's level of education, mother's occupation, and father's occupation; Section B: sexual behaviors, comprised of 7 questions (multiple-choice); Section C: awareness of family planning methods, comprised of 2 questions (multiple-choice); Section D: five-point Likert scale to assess knowledge and attitude on contraceptives comprised of 12 statements; Section E: contraceptive usage and provider factors influencing usage, comprised of 10 questions (multiple-choice); Section F: five-point Likert scale to assess cultural, social, and religious factors influencing family planning usage comprised of 14 statements; Section G: five-point Likert scale to assess facilitating factors influencing family planning usage comprised of 8 statements. Before the actual data collection, permission was sought from the metropolis. The study's purpose was explained to all respondents to ensure there was full comprehension and to rule out any form of ambiguity and both informed oral and written consent were also obtained. The questionnaires were administered to respondents by the researchers on a one-on-one basis. Each questionnaire took approximately 15-20 minutes to answer. Each questionnaire was coded for easy retrieval. The tool for the study was reviewed by health experts to ensure content validity. The reliability coefficient of the instrument was 0.90.

Data processing and analysis

The Statistical Package for Social Sciences (SPSS version 27) was utilized for analysis after the field data was imported into Microsoft Excel. Distribution tables with corresponding frequencies, percentages, means, and standard deviations were made from the descriptive data after analysis. Fisher's exact test and Chi-square test were used to assess the characteristics associated with family planning utilization. Furthermore, using binary logistic regression, a 95% confidence interval analysis of the factors influencing family planning utilization was carried out. The significance threshold was established at P value <0.05.

Results

Socio-Demographic Characteristics

Table 1 shows the socio-demographic characteristics of the respondents. The average age of the respondents was 20 years (*SD*: 2.6 years). Majority of them (n=227, 59.1%) were 20 to 24 years old, unmarried (n=328, 85.4%), enrolled in school (n=267, 69.5%), and identified as Muslims (n=291, 75.8%). Other than half of the respondents were males (n=211, 54.9%), and (n=123, 46.1%) were enrolled in secondary school. Regarding parental characteristics, the majority of respondents' mothers (n=237, 61.7%) and fathers (n=201, 52.3%) were uneducated. Only (n=38, 9.9%) of the mothers and (n=92, 24.0%) of the fathers were employed.

Table 1: Socio-demographic characteristics (N=384)

Variable	Category	Frequency	Percentage (%)
Age (Mean ± SD)		20.0 ± 2.6	

	15-19 years	157	40.9
	20-24 years	227	59.1
Currently attends school			
	No	117	30.5
	Yes	267	69.5
Education status			
	No formal education	6	2.2
	Basic	60	22.5
	Secondary	123	46.1
	Tertiary	78	29.2
Marital status			
	Co-habituating	7	1.8
	Divorced/widowed	2	0.5
	Married	47	12.2
	Never married	328	85.4
Sex			
	Male	211	54.9
	Female	173	45.1
Religion			
	Christian	93	24.2
	Islam	291	75.8
Mother's level of education			
	No formal education	237	61.7
	Basic	69	18.0
	Secondary	41	10.7
	Tertiary	37	9.6
Father's level of education			
	No formal education	201	52.3
	Basic	59	15.4
	Secondary	58	15.1
	Tertiary	66	17.2
Mother's occupation			
	Employed	38	9.9

	Self-employed	249	64.8
	Unemployed	97	25.3
Father's occupation			
	Employed	92	24.0
	Self-employed	203	52.9
	Unemployed	89	23.2

Respondents' sexual behaviors

Table 2 shows the sexual behaviors of the respondents. Less than half (n=169, 44.0%) had ever had sex. The majority of them (n=99, 58.6%) were at least 18 years old when they had their first sex, and (n=151, 39%) reported having unprotected sex at some point. Among the 151 respondents who had unprotected sex, (n=97, 64.2%) were worried about being pregnant, (n=41, 27.2%) took drugs to prevent pregnancy, (n=28, 18.5%) got pregnant. Of those who became pregnant, (n=17, 60.7%) had the baby.

Table 2: Respondents' sexual behavior (N=384)

Variable	Category	Frequency	Percentage
Ever had sex			
	No	215	56.0
	Yes	169	44.0
Age at first sex (Mean ± SD)		17.7 ± 2.2	
	< 18 years	70	41.4
	≥ 18 years	99	58.6
Ever had unprotected sex			
	No	233	60.7
	Yes	151	39.3
Ever worried about becoming pregnant after unprotected sex? (n=151)			
	No	54	35.8
	Yes	97	64.2
What do you do to prevent pregnancy after unprotected sex (n=151)			0.0
	Take drugs	41	27.2
	Take herbs	4	2.6
	Nothing	106	70.2
Have you ever been pregnant (n=151)			
	No	123	81.5
	Yes	28	18.5
The outcome of the pregnancy (n=28)			
	Abortion	6	21.4

	Delivered the baby	17	60.7
	Had miscarriage	5	17.9

Awareness of family planning methods

Figure 1 shows the respondents' awareness of various FP methods. The study showed that all respondents (n=384, 100.0%) have heard about family planning. The male condom was the most popular family planning method (n=339, 88.3%) known to the respondents, followed by pills (n=232, 60.4%), female condoms (n=171, 44.5%), injectables (n=143, 37.2%), and implants (n=135, 35.2%). The family planning methods that were less known included lactation amenorrhoea (n=11, 2.9%), form or jelly (n=12, 3.1%), diaphragm (n=21, 5.5%), male sterilization (n=39, 10.2%), calendar method (n=39, 10.2%), female sterilization (n=41, 10.7%), and IUD (n=58, 15.1%).

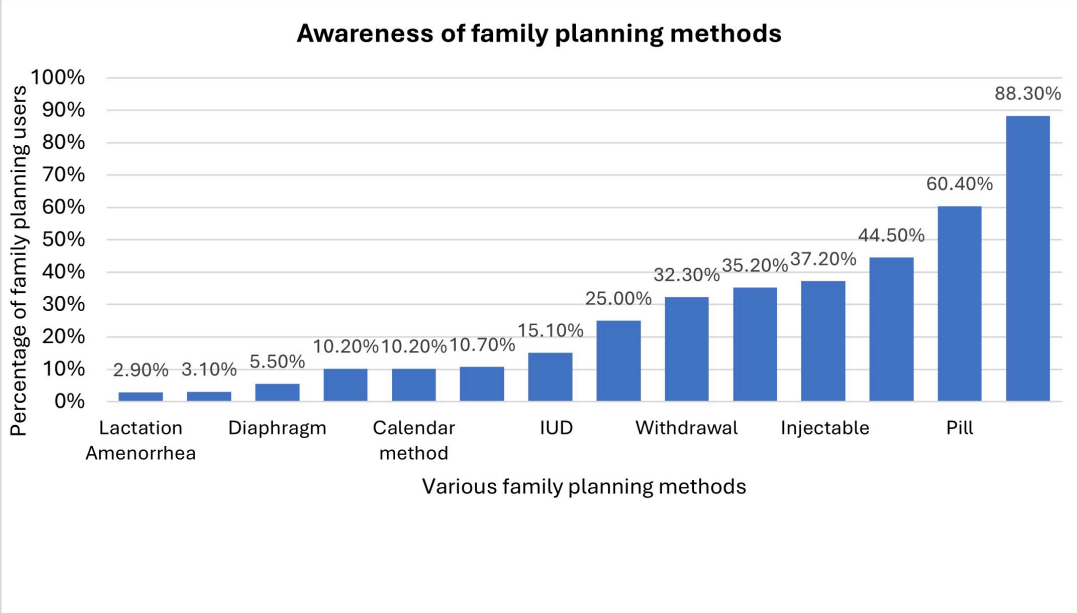

Figure 1: Awareness of family planning methods among respondents (N=384)

Knowledge and attitude of respondents on contraceptives

Table 3 shows the respondents' knowledge of contraceptives. Overall, (n=179, 46.6%) of respondents strongly agreed that male condoms can prevent Sexually Transmitted Diseases (STDs), while (n=12, 3.1%) disagreed. A higher proportion of respondents (n=166, 43.2%) were unsure about the need for a pelvic scan before using birth control methods, and (n=90, 23.4%) strongly disagreed with the perception that contraceptive methods are only for women. Most respondents (n=108, 28.1% agreed) believed that the negative impact of contraception on health outweighed the benefits. Most respondents (n=137, 36.1%) strongly agreed that contraceptive does not guarantee 100.0% protection but the least (n=15, 3.9%) strongly disagreed. Most respondents agreed (n=146, 38.0%) that users can switch contraceptive methods if their current method is unsuitable. In addition, a greater proportion of respondents (n=186, 48.9%) agreed that contraceptives alleviate concerns about unintended pregnancies and enable women to pursue higher education (n=174, 45.3%). Nevertheless, the majority (n=128, 33.3%) believed that condoms could exert less sexual pleasure.

Table 3: Knowledge and attitude of respondents on contraceptives (N=384)

Table 3: Knowledge and attitude of respondents on contraceptives (N=384)

Statements	Strongly disagree		Disagree		Not sure		Agree		Strongly Agree	
	N	%	N	%	N	%	N	%	N	%

Male condoms can prevent STDs	12	3.1	7	1.8	48	12.5	138	35.9	179	46.6
Need pelvic scan before taking birth control	27	7.0	15	3.9	166	43.2	85	22.1	91	23.7
Only women use contraceptive methods	90	23.4	46	12.0	80	20.8	85	22.1	83	21.6
Contraceptive bring more damage than benefit to health	26	6.8	34	8.9	108	28.1	111	28.9	105	27.3
Contraceptive protect the health of family and society	20	5.2	16	4.2	76	19.8	141	36.7	131	34.1
Contraceptives in young people increase infertility	25	6.5	22	5.7	71	18.5	126	32.8	140	36.5
Contraceptives do not guarantee 100% protection	15	3.9	28	7.4	78	20.5	122	32.1	137	36.1
You can change contraceptives, if not suitable	13	3.4	10	2.6	84	21.9	146	38.0	131	34.1
Condoms create less sexual pleasures	16	4.2	9	2.3	107	27.9	124	32.3	128	33.3
Male involvement in FP will increase acceptance	15	3.9	22	5.8	86	22.6	128	33.7	129	33.9
Contraceptive reduce fear of unplanned pregnancy	17	4.5	7	1.8	43	11.3	127	33.4	186	48.9
Contraceptives allow women to pursue higher education	22	5.7	6	1.6	54	14.1	128	33.3	174	45.3

Respondents' contraceptive usage and provider factors influencing usage

Table 4 shows the respondents' contraceptive usage and provider factors influencing usage. Approximately (n=96, 25.0%) of the respondents had used family planning services, with the majority (n=54 (56.3%) seeking these services at a pharmacy. About (n=85, 88.5%) of the respondents stated that they were successful in obtaining the family planning methods they required at the service point, and (n=78, 81.2%) expressed satisfaction with the quality of family planning services. In addition, (n=80, 83.3%) respondents considered the time spent accessing family planning services reasonable. Most of the respondents reported that service providers were friendly (n=84, 87.5%), respected their privacy (n=88, 91.7%), and provided clear and adequate information about family planning (n=77, 80.2%).

Table 4: Contraceptive usage and providers factors influencing usage among respondents (N=384)

Variable	Category	Frequency	Percentage
Ever accessed family planning service			
	No	288	75.0
	Yes	96	25.0
Where did you access family planning service (n=96)			
	Health facility	32	33.3
	Individual	8	8.3
	Pharmacy	54	56.3
	Others	2	2.1
Did you receive the services you went for (n=96)			

	No	11	11.5
	Yes	85	88.5
Satisfied with the service (n=96)			
	No	18	18.8
	Yes	78	81.2
Time spent to access service reasonable (n=96)			
	No	16	16.7
	Yes	80	83.3
How long did it take to access FP services (n=96)			
	1 hour & above	3	3.1
	30-60 minutes	30	31.2
	15 -20 minutes	16	16.7
	< 15 minutes	47	49.0
Service provider friendly (n=96)			
	No	12	12.5
	Yes	84	87.5
Information given about FP is clear and adequate (n=96)			
	No	19	19.8
	Yes	77	80.2
Was your privacy respected during FP service usage (n=96)			
	No	8	8.3
	Yes	88	91.7
Where do you seek the FP services (n=96)			
	Health facility	31	32.3
	Individual	6	6.3
	Pharmacy	34	35.4
	Others	25	26.0

Cultural, social, and religious factors influencing family planning usage

Table 5 shows cultural, social, and religious factors influencing family planning usage. Most of the respondents (n=112, 29.2%) strongly disagreed that contraceptive is for married and old people, and (n=104, 27.1%) strongly agreed that contraceptive before birth cause infertility. About (n=150, 39.1%) of the respondents see family planning users as prostitutes. The majority of the respondents strongly agreed that there is a lack of confidentiality and a judgmental attitude of service providers (n=150, 39.1%), and service providers has no knowledge about family planning (n=141, 36.7%). The study also showed that respondents were unsure as to whether Islam supports family planning (n=131, 34.1%) and (n=219, 57.0%) were also not sure if Christianity supports contraceptive usage.

Table 5: Cultural, social, and religious factors influencing family planning usage (N=384)

Statements	Strongly disagree		Disagree		Not sure		Agree		Strongly Agree	
	N	%	N	%	N	%	N	%	N	%
Contraceptive is for married and old people	112	29.2	49	12.8	73	19.0	59	15.4	91	23.7
Contraceptive before birth cause infertility	45	11.7	26	6.8	92	24.0	117	30.5	104	27.1
People see me as a prostitute	35	9.1	27	7.0	57	14.8	115	29.9	150	39.1
Long distance to the facility	30	7.8	39	10.2	74	19.3	106	27.6	135	35.2
I cannot afford the FP methods	33	8.6	36	9.4	77	20.1	114	29.7	124	32.3
Fear and being ashamed	27	7.0	32	8.3	53	13.8	109	28.4	163	42.4
Lack of confidentiality and a judgmental attitude of service providers	28	7.3	24	6.3	58	15.1	124	32.3	150	39.1
No knowledge about FP	25	6.5	42	10.9	73	19.0	103	26.8	141	36.7
Unavailability of contraceptives	29	7.6	47	12.2	70	18.2	107	27.9	131	34.1
No sexual partner	39	10.2	43	11.2	47	12.2	119	31.0	136	35.4
Discussion with spouse about FP's embarrassing	48	12.5	55	14.3	76	19.8	88	22.9	117	30.5
Have parental support	40	10.4	47	12.2	86	22.4	98	25.5	113	29.4
Islam supports contraceptive use	45	11.7	40	10.4	131	34.1	93	24.2	75	19.5
Christianity supports contraceptive usage	12	3.1	26	6.8	219	57.0	63	16.4	64	16.7

Facilitating factors influencing family planning usage

Table 6 shows facilitating factors influencing family planning usage. Around (n=125, 32.6%) of respondents said encouragement from partners/parents will increase family planning use, (n=122, 31.8%) said adequate knowledge about family planning will increase its usage, (n=116, 30.2%) said when contraceptives are sold or distributed it will increase usage, and (n=179, 46.6%) said free distribution of preferred contraceptives.

Table 6: Facilitating Factors Influencing Contraceptive Usage (N=384)

Statements	Extremely unlikely		Unlikely		Not sure		Likely		Extremely likely	
	N	%	N	%	N	%	N	%	N	%
Parental involvement in contraception decisions will increase usage	63	16.4	65	16.9	69	18.0	98	25.5	89	23.2
Religious leaders' acceptance of family planning will increase usage	56	14.6	67	17.4	74	19.3	101	26.3	86	22.4
Encouragement from opinion leaders will increase family planning use	53	13.8	77	20.1	72	18.8	101	26.3	81	21.1
Encouragement from partners/parents will increase family planning use	49	12.8	55	14.3	69	18.0	125	32.6	86	22.4
Adequate knowledge about family planning will increase its usage	54	14.1	44	11.5	67	17.4	122	31.8	97	25.3
Effective of family planning will increase its usage	51	13.3	48	12.5	81	21.1	110	28.6	94	24.5

When family planning is sold or distributed, it will increase usage	59	15.4	42	10.9	78	20.3	116	30.2	89	23.2
Free distribution of preferred family planning	69	18.0	37	9.6	43	11.2	56	14.6	179	46.6

Association Between Contraceptive Usage and Socio-Demographic Characteristics

Table 7 presents the association between socio-demographic characteristics and contraceptive usage. The study revealed that there was a statistically significant association between family planning usage and respondents' religion ($p < 0.001$), marital status ($p=0.002$), ever-had sex ($p < 0.001$), age at first sex ($p < 0.001$), mother's level of education ($p=0.028$), and mother's occupation ($p=0.017$).

Table 7: Association between family planning usage and socio-demographic characteristics

Variable	Category	Family planning usage		P-value
		Yes, n (%)	No, n (%)	
Age	15-19 years	40 (10.4)	117 (30.4)	0.857[a]
	20 - 24 years	56 (14.5)	171 (44.5)	
Education status				0.162[b]
	Not educated	3 (1.1)	3 (1.1)	
	Educated	63 (23.6)	198 (74.1)	
Sex of respondent				0.066[a]
	Male	45 (11.7)	166 (43.2)	
	Female	51 (13.2)	122 (31.7)	
Religion				**<0.001**[a]
	Christian	36 (9.3)	57 (14.8)	
	Islam	60 (15.6)	231 (60.1)	
Marital status				**0.002**[a]
	Married	23 (5.9)	31 (8.0)	
	Not married	73 (19.0)	257 (66.9)	
Ever had sex				**<0.001**[a]
	No	23 (5.9)	192 (50.0)	
	Yes	73 (19.0)	96 (25.0)	
Age at first sex				**<0.001**[a]
	< 18 years	29 (7.5)	41 (10.6)	
	≥ 18 years	44 (11.4)	55 (14.3)	
Mother's level of education				**0.028**[a]
	No formal education	50 (13.0)	187 (48.7)	
	Basic	20 (5.2)	49 (12.7)	

	Secondary	10 (2.6)	31 (8.0)	
	Tertiary	16 (4.1)	21 (5.4)	
Father's level of education				0.495[a]
	No formal education	46 (11.9)	155 (40.3)	
	Basic	13 (3.3)	46 (11.9)	
	Secondary	18 (4.6)	40 (10.4)	
	Tertiary	19 (4.9)	47 (12.2)	
Mother's occupation				**0.017**[a]
	Employed	15 (3.9)	23 (5.9)	
	Self-employed	65 (16.9)	184 (47.9)	
	Unemployed	16 (4.1)	81 (21.0)	
Father's occupation				0.196[a]
	Employed	29 (7.5)	63 (16.4)	
	Self-employed	49 (12.7)	154 (40.1)	
	Unemployed	18 (4.6)	71 (18.4)	

[a]Chi-Square test of association

[b]Fisher's exact test: [Education status (basic, secondary, and tertiary were recoded as "educated" while no formal education as "not educated")]

Predictors of family planning usage among young people

Table 8 shows the predictors of family planning usage among respondents. In the multivariate binomial logistic regression model analysis, respondents who were Christians had higher odds of family planning usage (aOR, 3.24; 95% CI, 1.47-7.14; p=0.003) than those who were Muslims. Also, respondents who had ever had sex had higher odds of family planning usage (aOR, 5.93; 95% CI, 2.34-15.03; p<0.001) than those who had never had sex.

Table 8: Predictors of family planning usage among respondents

Variable	Category	Adjusted Model		
		Odds ratio	95% C. I	P value
Age				
	15-19 years	Ref		
	20 - 24 years	1.16	0.56 - 2.42	0.680
Education status				
	Not educated	Ref		
	Educated	0.14	0.01 - 1.10	0.062
Sex of respondent				
	Male	Ref		
	Female	1.16	0.57 - 2.35	0.672

Religion				
	Islam	Ref		
	Christian	3.24	1.47 – 7.14	**0.003**
Marital status				
	Not married	Ref		
	Married	2.40	0.86 – 6.72	0.094
Ever had sex				
	No	Ref		
	Yes	5.93	2.34 – 15.03	**<0.001**
Had unprotected sexual intercourse before				
	No	Ref		
	Yes	2.28	0.96 – 5.44	0.061
Mother’s level of education				
	No formal education	Ref		
	Basic	1.37	0.46 – 4.04	0.564
	Secondary	0.47	0.12 – 1.81	0.278
	Tertiary	1.16	0.29 – 4.55	0.830
Father's level of education				
	No formal education	Ref		
	Basic	0.81	0.25 – 2.63	0.730
	Secondary	1.51	0.50 – 4.58	0.460
	Tertiary	0.59	0.15 – 2.18	0.429
Mother's occupation				
	Unemployed	Ref		
	Employed	3.24	0.62 – 16.89	0.161
	Self-employed	1.44	0.47 – 4.39	0.513
Father's occupation				
	Unemployed	Ref		
	Employed	1.13	0.30 – 4.28	0.851
	Self-employed	0.59	0.18 – 1.88	0.379

Discussion

The present study assessed the barriers and facilitators to the uptake of contraceptives among young people in the Tamale Metropolis. The study was predominated by a majority of the participants who were between the ages 20 to 24 years (59.1%), were males (54.9%), had been to secondary school (46.1%), and were Muslims (75.8%).

Less than half of respondents (44.0%) had ever had sex of which 39.3% had unprotected sex. This implies that almost all the respondents had not used protection during sexual intercourse. This shows similarity with the study from Ghana whereby 66% of the respondents had not used any form of protection at first [14]. This is dissimilar to the study from Nigeria whereby more than half of respondents (55.1%) had protected sex [15]. Also, a study from Ghana showed that out of (86.7%) who ever had sex, (66.7%) had ever used at least one form of modern contraception [16].

The current study showed that all respondents had heard about family planning and male condom (88.3%) was the most popular FP method. The state of awareness about family planning among the respondents was satisfactory. This may be because many of them were in secondary school level of education. This result is congruent with the research from Lesotho which found that awareness of contraceptives and family planning was 97.5% and the most common method known about was condoms (95.0%). The study similarly reported that most of the respondents had come to know about family planning while they were in the secondary school level of education [17]. Two other surveys in India, and Ghana showed awareness regarding family planning was high and the condom was the most popular contraceptive method among the respondents [18,19]. In contrast, cross-sectional research from Yemen revealed that the most known contraceptive method was oral pills (78.1%) [20].

According to the present study, the majority of respondents (46.6%) said that male condoms can prevent Sexually Transmitted Diseases (STDs) and agreed with the studies from Brazil and South Africa which showed that most of the respondents (53.9%, 88.7% respectively) mentioned that the condom served to prevent STDs [21, 22]. Also, the study discovered that respondents were of the view that contraceptives bring more damage than health benefits, and this was in line with the previous study from Tanzania (48.1%) [23]. Furthermore, the study revealed that most of the respondents (36.1%) said that contraceptives do not guarantee 100.0% protection, and this was in line with the study from Malaysia (54.2%) [24]. The similarities in findings may be influenced by the educational level of respondents.

The study found that only 25.0% of respondents patronized the services of family planning. This result is high but similar to the study from Tanzania (6%) [23]. Two other studies from Ghana also discovered that only 18% and 6% of respondents sought services of family planning [25]. Low usage of family planning methods leads to higher birth rates and rapid population growth. This can affect the supply of essential resources such as food, water, healthcare, education, and housing, impacting the quality of life for individuals and hindering sustainable development. Thus, investments in family planning programs can contribute to improved maternal and child health, poverty reduction, gender equality, and sustainable development, benefiting individuals, families, and societies as a whole.

Regarding factors influencing family planning usage, most of the respondents (29.2%) strongly disagreed and were of the view that contraceptives are not for married and old people. This is not in line with the qualitative study from Malawi, where a general agreement among respondents was that contraceptives are for married people [26]. The study has also shown that a higher frequency of respondents (27.1%) believed that contraceptives before birth cause infertility, and was in agreement with the qualitative studies from Guinea and Nepal [6, 27]. Moreover, the study found that about 39.1% of the respondents view family planning users as prostitutes. This is in agreement with the studies from Uganda, Kenya, and Nigeria [28–30]. The current study again found that the majority of the respondents (39.1%) indicated that there is a lack of confidentiality and a judgmental attitude of service providers, and this was in line with the study from the United States of America [31].

Moreover, about facilitating factors influencing family planning use, the current study showed that parental involvement in contraceptive decisions is likely to increase FP use (25.5%), and was in line with the study from Nigeria [32]. Also, religious leader acceptance is found likely to increase family planning usage (26.3%) and consistent with the research from Somalia [33]. Furthermore, encouragement from partners/parents is found likely to increase FP use (32.6%), and this was in line with the study from Guinea [34]. Thus, increasing the usage of family planning requires a multi-faceted approach involving parental involvement and support from significant individuals such as religious leaders and partners. By addressing these factors, individuals can make informed choices about family planning, leading to improved reproductive health outcomes.

The study revealed a significant association between marital status (p=0.002) and contraceptive usage. This is in agreement with the studies from Zambia and Uganda [35-37]. Also, ever had sex (p < 0.001) was seen to be a factor associated with family planning usage, and was in line with the study from Tanzania []. The study likewise found that the mom's level of education (p=0.028) and the mother's occupation (p=0.017) were significantly associated with family planning usage. A multivariate logistic regression identified that subjects who had sex were more likely to use family planning compared to those who had never had sex (aOR, 5.93; 95% CI, 2.34-15.03; p<0.001) and this is also in support of the study from Tanzania [38].

Strength and limitation

The strength of this study is that we were able to study a greater number of young people while also employing proper descriptive and inferential statistics. Conversely, the limitation of the study is that the results may have limited applicability for young people, as this study focused solely on individuals aged 15 to 24 years, and also in a single district within the Northern Region of Ghana.

Conclusion

In conclusion, the study found that all young people were aware of family planning. Many of them showed good knowledge of contraception, with male condoms being the most widely known method. Most of the respondents are in favor of switching birth control methods if necessary. On the other hand, it was found that the usage of contraceptives among young people was low. This finding underlines the need to make family planning information and services more accessible by providing accurate, comprehensive information through healthcare providers, websites, hotlines, and educational materials. Also, successful patronage of family planning requires addressing cultural and social barriers, challenging misconceptions, and involving influential figures to advocate for family planning within communities.

Supporting Information

None

Ethical considerations

The ethical clearance for this study was obtained from the Committee on Human Research and Publication Ethics with reference number: CHRPE/AP/423/23. An introductory letter was obtained from the Research and Quality Assurance unit of the college and sent to the Tamale Metropolitan Assembly for approval of the study. Respondents were spoken with and obtained their verbal consent before the interview began. For respondents less than 18, an assent form was obtained from their relative or guardian: this is when a parent or guardian had to sign the consent form to guarantee's the inclusion of the child. All data were kept confidential and used only for research.

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Author Contribution Statement

Conceptualization: AA, OAI, AI, AO &SAA; **Data collection:** OAI, AI, AO &SAA; **Data curative:** AA, AY, MMI; **Formal analysis:** MMI, AY, RI, OAI, MF; **Project supervision:** AA, OAI, RI, AY & MF; **Manuscript Original Draft writing:** OAI, AI, AO, SAA, MMI; **Manuscript Review and editing:** AA, RI, AY, MF.

All authors attest they meet the ICMJE criteria for authorship and gave final approvalforsubmission.

Data Availability Statement

Data used/generated in this study is available on request to the corresponding author.

Additional information

No additional information is available for this paper.

Declaration of competing interes

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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